IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): An engine control device for a construction machine, characterized in that said engine control device comprises an engine as a power source, control means for performing an automatic stop control to automatically stop said engine when a predetermined automatic stop condition is met, and warm-up state detecting means for detecting a warm-up state of said engine and wherein said control means is adapted to perform said automatic stop control in a condition that completion of a warm-up operation for said engine is detected by said warm-up state detecting means.

Claim 2 (Original): An engine control device for a construction machine, characterized in that said engine control device comprises an engine as a power source, control means for performing an automatic stop control to automatically stop said engine when a predetermined automatic stop condition is met, and cool-down necessity detecting means for detecting whether or not said engine is in a state where a cool-down operation is required and wherein said control means is adapted to perform said automatic stop control in a condition that a cool-down period is kept before said engine is automatically stopped when said cool-down necessity detecting means detects that said engine is in an operation state where said engine requires the cool-down operation.

Claim 3 (Original): The engine control device for the construction machine according to claim 2, wherein, as said cool-down necessity detecting means, a temperature detector for detecting a temperature of a portion whose temperature increases in accordance with an operation of said engine, and said control means is adapted to select a required cool-down period in accordance with the detected temperature by said temperature detector.

Claim 4 (Original): The engine control device for the construction machine according to claim 3, wherein said control means automatically selects one of a plurality of cool-down period patterns in accordance with the detected temperature by said temperature detector.

Claim 5 (Original): The engine control device for the construction machine according to claim 2, wherein said control means stops said engine when completion of the cool-down operation of said engine is detected by said cool-down necessity detecting means.

Claim 6 (Original): An engine control device for a construction machine, characterized in that said engine control device comprises an engine as a power source, control means for performing an automatic stop control to automatically stop said engine when a predetermined automatic stop condition is met, and warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation of said engine is required, and wherein said control means is adapted to automatically restart said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.

Claim 7 (Original): The engine control device for the construction machine according to claim 6, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine and said control means performs said automatic stop control in a condition that completion of the warm-up operation is detected by said warm-up state detecting means.

Claim 8 (Currently Amended): The engine control device for the construction machine according to ~~any one of claims 2 to 5~~ claim 2, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine, and said control means is adapted to perform said automatic stop control in a condition that completion of a warm-up operation is detected by said warm-up state detecting means.

Claim 9 (Currently Amended): The engine control device for the construction machine according to ~~any one of claims 2 to 5~~ claim 2, wherein said engine control device further comprises warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and said control means is adapted to automatically restart said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.

Claim 10 (Currently Amended): The engine control device for the construction machine according to ~~any one of claims 2 to 5~~ claim 2, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine and warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and that said control means comprising:

A) performing an automatic stop control in the condition that completion of the warm-up operation is detected by said warm-up state detecting means; and

B) restarting said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.

Claim 11 (New): The engine control device for the construction machine according to claim 3, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine, and said control means is adapted to perform said automatic stop control in a condition that completion of a warm-up operation is detected by said warm-up state detecting means.

Claim 12 (New): The engine control device for the construction machine according to claim 4, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine, and said control means is adapted to perform said automatic stop control in a condition that completion of a warm-up operation is detected by said warm-up state detecting means.

Claim 13 (New): The engine control device for the construction machine according to claim 5, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine, and said control means is adapted to perform said automatic stop control in a condition that completion of a warm-up operation is detected by said warm-up state detecting means.

Claim 14 (New): The engine control device for the construction machine according to claim 3, wherein said engine control device further comprises warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and said control means is adapted to automatically restart said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up

operation is required after said engine is automatically stopped by said automatic stop control.

Claim 15 (New): The engine control device for the construction machine according to claim 4, wherein said engine control device further comprises warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and said control means is adapted to automatically restart said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.

Claim 16 (New): The engine control device for the construction machine according to claim 5, wherein said engine control device further comprises warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and said control means is adapted to automatically restart said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.

Claim 17 (New): The engine control device for the construction machine according to claim 3, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine and warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and that said control means comprising:

A) performing an automatic stop control in the condition that completion of the warm-up operation is detected by said warm-up state detecting means; and

B) restarting said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.

Claim 18 (New): The engine control device for the construction machine according to claim 4, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine and warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and that said control means comprising:

A) performing an automatic stop control in the condition that completion of the warm-up operation is detected by said warm-up state detecting means; and

B) restarting said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.

Claim 19 (New): The engine control device for the construction machine according to claim 5, wherein said engine control device further comprises warm-up state detecting means for detecting a warm-up state of said engine and warm-up necessity detecting means for detecting whether or not said engine is in a state where a warm-up operation is required, and that said control means comprising:

A) performing an automatic stop control in the condition that completion of the warm-up operation is detected by said warm-up state detecting means; and

B) restarting said engine when said warm-up necessity detecting means detects that said engine is in the state where the warm-up operation is required after said engine is automatically stopped by said automatic stop control.